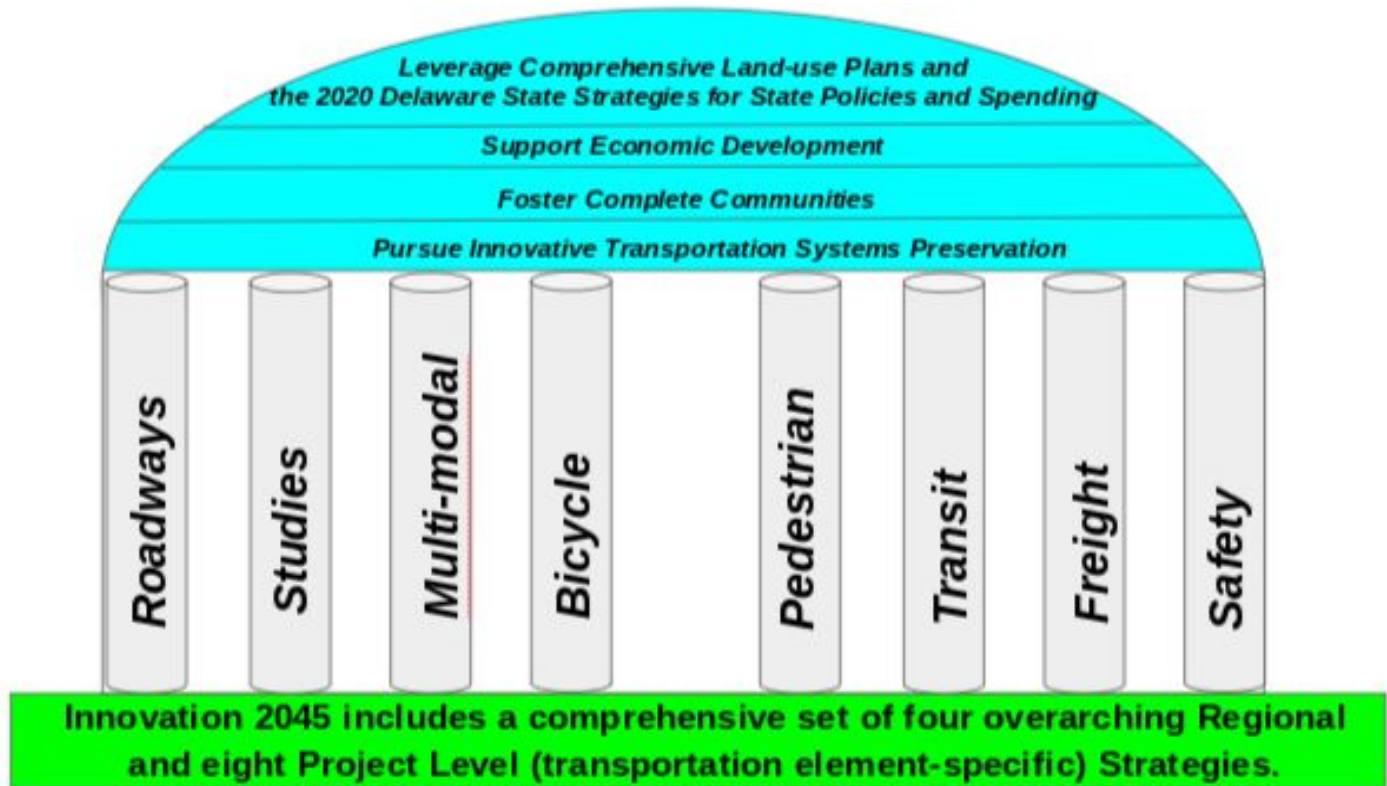
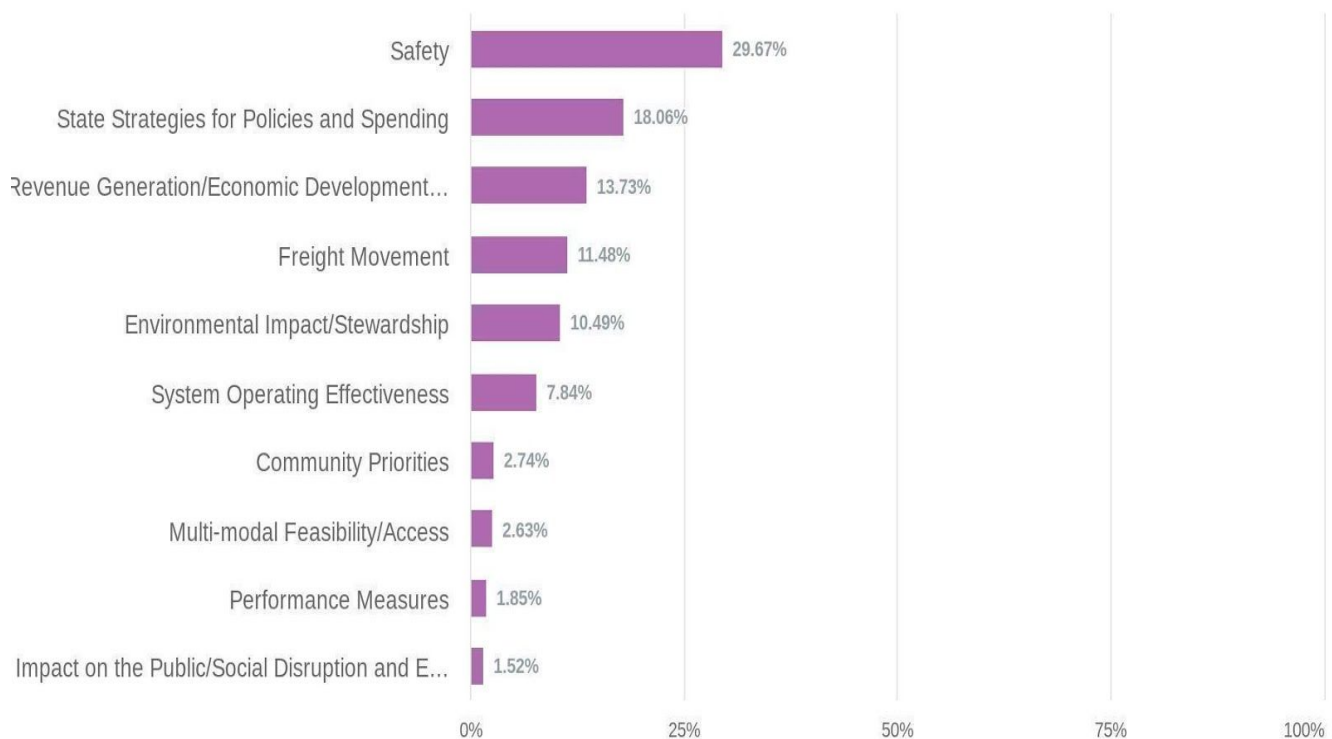


## Chapter IV- OPERATIONAL AND MANAGEMENT STRATEGIES

Innovation 2045 includes a comprehensive set of four overarching Regional and eight Project Level (transportation element-specific) strategies. These strategies will help preserve existing transportation assets, improve system performance, enhance residents' quality of life, support economic development, provide more transportation choices, and protect the environment. FHWA provides information on [Transportation Systems Management and Operations](#) (TSMO) strategies. Also called Management and Operations (M&O) strategies, these are defined as "integrated strategies to optimize the performance of existing infrastructure through the implementation of multi-modal and intermodal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system" ([TSMO](#)).



Several operational and management strategies can be utilized to address the variety of transportation needs within the D/KC MPO planning area, and ultimately support the goals and objectives identified in Chapter 1. Many of these strategies are supported by the **D/KC MPO's Decision Lens Project Priority Process** (explained further in Chapter VI). Each proposed transportation project is assigned a quantitative value based on how that project supports ten screening criteria (found in Chapter VI). If the project supports multiple screening criteria, the more quantitative value the project can receive. The higher the quantitative value received, the better priority ranking the project receives regarding funding.



### **D/KC MPO Overarching Strategies**

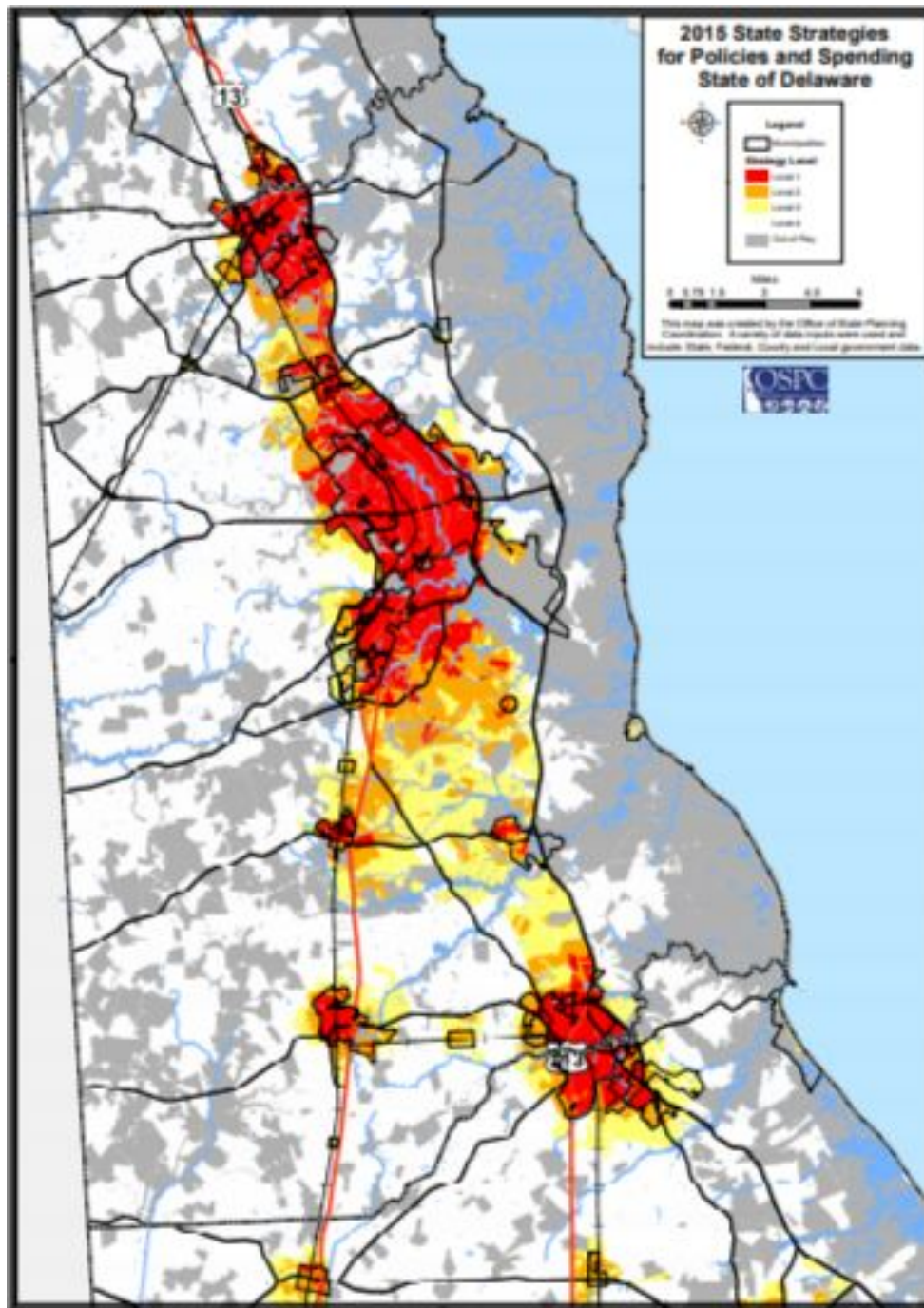
The following four strategies and eight project level strategies are all linked through the D/KC MPO Decision Lens Project Priority Process, support of our Federal and State partners strategies, and integration with our Local partners' economic and land-use policies.

### ***Leverage D/KC MPO Partner Comprehensive Land-use Plans and the 2020 Delaware State Strategies for State Policies and Spending***

As described in Chapter 1, comprehensive planning is a process that determines goals and aspirations in terms of community development. This process results in a comprehensive plan expressing and regulating public policies on transportation, utilities, land-use, recreation, and housing. Municipal and County Comprehensive Plans in Delaware are updated every ten years and must be "certified" by the Governor of Delaware through the Delaware Office of State Planning Coordination (OSPC). During our Innovation 2045 MTP update, all twenty (20) Kent County Municipal Comprehensive Plans and Kent County's Comprehensive Plan were reviewed. The plans were evaluated to see where common goals and objectives could be linked to Innovation 2045 MTP goals and objectives. Innovation 2045 would also list financially responsible projects that support our MPO partners' comprehensive plans. Part of this strategy includes monitoring changes to Comprehensive Plans that may be contrary to DelDOT's 2019 Innovation in Motion, the D/KC MPO's Innovation 2045 goals, objectives, and performance measures, and the OSPC [2020 Strategies for State Policies and Spending](#) (State Strategies).

The purpose of the State Strategies is to coordinate land-use decision-making with the provision of infrastructure and services in a manner that makes the best use of our natural and fiscal resources. The State Strategies coordinate the State and local land-use by providing a series of maps that identify areas as

"Investment Levels" ranging from urban (Level 1) to rural (Level 4) areas. It also includes areas considered Out-of-Play, with each level having a different policy and funding criteria. The State Strategies map helps coordinate local land-use decisions with State land use policy and infrastructure funding. For example, the State funds the bulk of infrastructure (e.g., roads and schools) and services (e.g., emergency services and social services) that support land-use decisions. Kent County local governments using the State Strategies helps create a unified view toward growth and preservation priorities that all governments can use to allocate resources. DelDOT's 2019 Innovation in Motion Long Range Transportation Plan explains how the State Strategies are used in range transportation financing. Transportation investments will be required to reflect State strategy priorities: "Growth-related infrastructure will be directed towards level 1 and 2 areas while levels 3 and 4 will focus on preserving and protecting open space, agriculture, and a rural legacy" (DelDOT, 2019 P. I-79 and II-12). Innovation 2045 uses the State Strategies in the transportation project prioritization process. The State Strategies help link State and local land-use initiatives that affect transportation systems in Kent County.



(Map source found at Delaware [2015 State Strategies Interactive Map](#) )

This strategy also includes reviewing updated comprehensive plans from our D/KC MPO Partners to ensure transportation elements (as described in this chapter) can be supported by Innovation 2045 goals, objectives, and performance measures and where applicable, leveraging existing transportation networks/systems (i.e., roads) instead of building new ones contrary to the 2020 State Strategies.

## ***Support Economic Development***

Where supported by the State Strategies and local governments comprehensive plans, support transportation project planning efforts geared toward enhancing economic development opportunities in conjunction with efforts to create quality places that support a range of lifestyle and transportation choices, promote increased density through mixed-use development, and use a centers-and-corridors strategy in planning efforts. This strategy also supports DelDOT's Long Range Goal, "Economic Vitality," which requires "an excellent transportation network that meets the needs of a diverse and growing economy" (DelDOT, 2019, P. ES-3). This strategy has two parts: Transportation Project Funding and Employer Incentives.

Transportation Project Funding was briefly described at the beginning of this chapter. Examples of transportation projects supporting economic development could include:

- any existing road improvements,
- proposed new local roads,
- new bus or bus route,
- multi-modal paths, or
- facilities that directly support the economic development project (new business park, opportunity zones, employment centers, etc.).

The second part of this strategy encourages employers to incentivize best transportation practices such as increased ride-sharing efforts (carpooling and van-pooling), and increased multi-modal use (transit, bike, or walking). These can be based on informal arrangements between individuals or formally arranged through ride-matching services. "Available research indicates that improving awareness, trust, and willingness to ride with strangers, as well as flexibility in scheduling, may help to increase carpool use" (El Paso MPO 2045 MTP. P 4-1).

## ***Foster Complete Communities***

Similar to the first strategy listed above, Complete Communities is a program supported by the Delaware Office of State Planning Coordination and DelDOT. The program was designed for DelDOT by the University of Delaware to "help local communities to better plan for and build attractive, inclusive, efficient, healthy and resilient places" (DelDOT, 2019. P. II-15). This program is similar to the US Department of Transportation's (DOT) complete streets program that encompasses many approaches to planning, designing and operating roadways, and rights-of-way with all users in mind to make the transportation network safer and more efficient (US DOT, [Website](#)). The Complete Communities program provides land-use planning tools and techniques. It uses complete streets as one of five elements of a complete community. DelDOT's 2019 Innovation in Motion uses the Complete Communities program as part of its long range transportation plan implementation strategy (DelDOT, 2019. P. II-6 and II-25), and as such, the D/KC MPO will facilitate the use of Complete Communities as one of Innovation 2045's operation and management strategies.

The D/KC MPO has no legislative authority over local governments' land-use decisions. However, we work closely with member jurisdictions to explore and evaluate land-use decisions on the Kent County transportation network. Also, the D/KC MPO is permitted to review land-use plans submitted to the Delaware Office of State Planning Coordination through its [Preliminary Land-use Service](#) (PLUS). PLUS provides an opportunity for



State agencies to review significant land-use change proposals before submission to local governments in this process. The D/KC MPO can comment on potential transportation impacts from these plans by also recommending the use of Complete Communities planning practices as available on the UD Complete Communities website and as supported by DeIDOT.

### ***Pursue Innovative Transportation Systems Preservation***

As described in the 2019 DeIDOT LRTP (Innovation in Motion), system management and operation, as well as system preservation, are listed as two of DeIDOT's ten goals (DeIDOT, 2019. P. ES-3). As population and employment centers increase, our roadway network can become constrained during typical commuter times. This situation decreases the LOS standard for those roads and potentially adding to poor air quality as more motor vehicles idle in stop-and-go traffic. The D/KC MPO supports the leveraging of technology as a means to preserve the current roadway network before considering adding additional lanes to existing roadways as a technique to increase traffic flow. DeIDOT's [Integrated Transportation Management System](#) (ITMS) uses new technologies such as traffic control devices, closed-circuit cameras along with Intelligent Transportation System (ITS) devices (i.e., wireless radio, Bluetooth and Wi-Fi, microwave systems and fiber optics) to improve traffic operations and safety (DeIDOT, 2019, P. II-37).

This strategy includes the review of road construction upgrades (i.e., road widening, traffic circles, etc..) and Transportation Improvement District (TID) projects proposed by D/KC MPO Partners. These reviews will assess whether or not current technological efficiencies and innovations were considered and evaluated before concluding that road construction upgrades are required.

### **D/KC MPO Project Level (Transportation Element) Strategies**

As described in Chapter VI, the following categories are considered transportation elements that may receive transportation project funding: Roadways, Studies, Multi-modal, Bicycle, Pedestrian, Transit, Freight, and Safety. Projects identified in these eight categories are found in Chapter VI and listed as potential near term, mid-term, long term, and aspiration projects.

2021 MTP Project Count as of 13 August 2020				
	Near Term 2021-2026	Mid Term 2027-2034	Long Term 2035-2045	Apiration Project
Roadway	22	27	3	1
Studies	0	0	0	45
Multi-Modal	10	10	2	9
Bicycle	8	11	3	0
Pedestrian	9	4	2	0
Transit	3	0	0	0
Freight	5	5	0	0
Safety	4	0	0	0
<b>Total</b>	<b>61</b>	<b>57</b>	<b>10</b>	<b>55</b>
<b>183</b>				
<b>Combined Total</b>	There are 12 Roadway projects which continue into another Term (10 Near into Mid and 2 Mid into Long). So, in reality, there is only <b>171 Projects</b>			

The following information describes how each of the eight transportation element strategies will be implemented.

### **Roadways**

The overall roadway strategy is to preserve the existing transportation system. This strategy includes:

- focusing investments on upgrades to alternative routes providing local roadway connections that increase connectivity;
- providing alternative access, particularly for local motorists; and
- ensuring local roads are upgraded in a manner consistent with future growth as shown in D/KC MPO partners' comprehensive plans, long range transportation plans, transportation planning studies, and the State Strategies.

Additionally, current and predicted Level of Service (LOS) on Kent County roadways must be considered when identifying roadway upgrades. Roadway upgrades are often localized enhancements (i.e., individual intersection) and not necessarily a system-wide improvement (i.e., the addition of shoulders beyond the limits of new development). These projects are typically identified after a period of monitoring, which results in potential improvements identified to keep up with projected traffic volumes. As with the other seven transportation elements, the strategy used for roadway project selection will be based on the highest quantitative scoring after applying the ten screening criteria to specific roadway projects.

### **Studies**

Proposed transportation studies are identified either within Innovation 2045 or the annual Unified Planning Work Program (UPWP). The proposed studies will be evaluated and ranked using the D/KC MPO Decision Lens process. The MPO uses specific study categories: Bicycle and Pedestrian, Parking, Transportation Corridor, Transportation Improvement Districts, Transit, Freight (Rail or Truck), Performance Measures, and Miscellaneous Transportation Studies. Also, the MPO created a standard process when recommending

transportation studies or plans to be funded with State and Federal money. All study proposals must support the MPO's most recent Metropolitan Transportation Plan. The study recommendations are ranked as:

- 1) Primary (studies mentioned explicitly in the MTP);
- 2) Secondary (studies that support specific goals within the MTP); or
- 3) Tertiary (studies that support D/KC MPO partners' comprehensive plans' projects).

Following recommendations from [FHWA Planning and Environmental Linkages](#) (PEL), studies sponsored by the D/KC MPO will conclude with recommended courses of action and a Purpose and Need statement. The Purpose and Need statements will assist DelDOT engineers in their National Environmental Policy Act (NEPA) documentation. This strategy helps ensure consistency and linkage with State, Local, and D/KC MPO long range planning goals and objectives.

### ***Multi-modal***

These are projects which support two or more different transportation modes (elements). For example, a pathway that can be used by bicyclists and pedestrians. There could also be multi-modal projects within specific Project Level (Transportation Element) Strategies such as:

- **Freight** with a truck and rail terminal facility;
- **Transit** with a bike rack on new electric buses and bicycle parking at transit stops;
- **Bicycle** with and **Roadway** with bike lanes and pedestrian crosswalks included with road widening projects;
- **Community projects** including bus stops, park and ride facilities, sidewalk/crosswalk safety improvements, and bicycle lanes/route designations;
- **Street projects** with street lighting, sidewalk enhancement, and pedestrian sidewalk connections, crosswalks, pedestrian traffic signals, and pedestrian signs; and
- **Connectivity projects** to utilize existing transportation assets such as improved signage, access roads, development, or support of an integrated transportation corridor and/or improvements to the productivity, efficiency, and security that support goods movement.

### ***Bicycle***

As stated in the D/KC MPO 2017 Regional Bike Plan, the vision for Kent County is to “*become a place where many people, young and old, use bicycles for transportation and/or recreation*” (D/KC MPO, 2017, P. 6). To facilitate this vision, the D/KC MPO maintains two goals:

- Create an effective and safe bicycle transportation system and
- Make bicycle riding a viable transportation option for persons of all ages in Kent County.

This vision is supported by several existing bicycle-related policies, plans, and initiatives such as [DelDOTs Blueprint for a Bicycle-Friendly Delaware](#); [Healthy and Transit-Friendly Development Act](#); [First State Trails and Pathways Initiative](#); [DelDOT's Complete Streets Policy](#); [DelDOTs Safe Routes to School Program](#); and (currently being drafted) the City of Dover and City of Milford's Bike and Pedestrian Plans. The overarching goal with all bicycle plans is to identify and construct low-stress bike projects. The challenge, however, is that there are many existing policies, plans, and initiatives affecting proposed bicycle projects that need effective



coordination linking DelDOT and D/KC MPO partners bike projects. The use of interactive Geographic Information System (GIS) mapping can help facilitate a more effective and coordinated effort regarding bike project construction. The D/KC MPO will also leverage bike planning assets within DelDOT, which implements the Blueprint for a Bicycle-Friendly Delaware, and FHWA staff who implement the 2019 FHWA [Bikeway Selection Guide](#) (design flexibility and connected, safe, and comfortable bicycle networks) as part of the interactive GIS map.

The strategy continuing out to 2045 is to leverage GIS capabilities to more effectively document existing and proposed bike plan projects and studies against DelDOT and FHWA policies to ensure a well-coordinated implementation of bike projects supporting a safe and low-stress bicycle network within Kent County.

### ***Pedestrian***

The DK/C MPO supports transportation projects that help improve the quality of life throughout Kent County by promoting safe and convenient pedestrian travel, and that enhances personal mobility, accessibility, and fitness. Many times, pedestrian transportation projects (sidewalk connections; HAWK (High-Intensity Activated Crosswalk) Pedestrian Beacon; walkways; grade-separated crosswalks, etc.) are incorporated into bicycle or road projects and appear as multi-modal projects rather than separate pedestrian projects. The overall goal is to improve accessibility for all pedestrians, including older adults and people with disabilities, to make Kent County more walkable and accessible for people of all ages and abilities.

The Innovation 2045 Pedestrian Strategy includes support for transportation improvements by investigating ways to get people involved in walking. The MPO will use "Complete Communities" initiatives to expand public awareness and facilitate acceptance of walking as a viable means of transportation. Funding will be directed to pedestrian transportation projects in areas of pedestrian risk to address pedestrian safety to reduce pedestrian injuries and fatalities.

### ***Transit***

The strategy listed in the 2017 D/KC MPO MTP was to "adjust the transit system to address local needs." Adjust transit operations along any one of fourteen routes based on usage (ridership) and results from an Origin-Destination Study. Additionally, the last [Kent County Transit Transportation Plan](#) written was in 2010 and should be updated to account for land-use, economic, and population changes in Kent County. These changes are documented in current Kent County Municipal Comprehensive Plans, D/KC MPO Metropolitan Transportation Plans, DelDOT's Long Range Transportation Plan, and the Federal Transit Administration (FTA) guidance. For example, the FTA [Transportation Planning website](#) provides transit planning information such as [Transit-oriented development](#), which includes "a mix of commercial, residential, office, and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities". This information is very similar to FHWA's "Complete Streets" and DelDOT's "Complete Communities."

In addition to an updated Kent County Transit Transportation Plan, the overall transit strategy for Innovation 2045 will focus on land-use and technological changes. Transit-Oriented Development goals will be considered in transportation project funding priority selection as well as new bus technologies such as electric and natural gas power.

## **Freight**

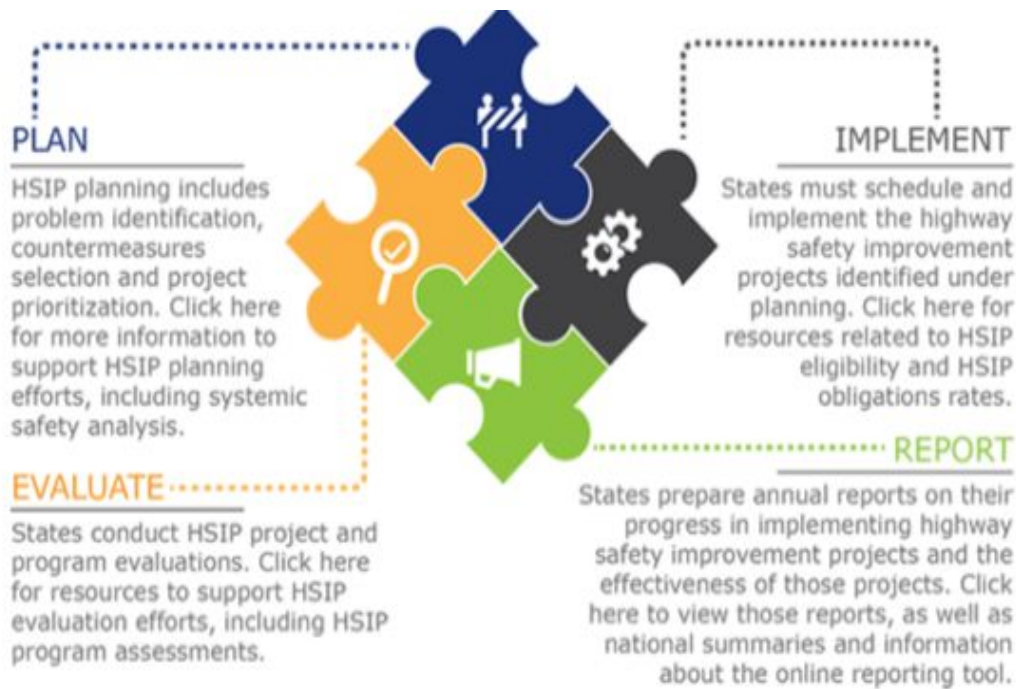
The 2017 D/KC MPO MTP had one freight strategy, which was to implement the recommendations from the [Delmarva Freight Plan](#) (DFP). These recommendations included four road upgrades, four virtual weigh stations, and two area studies. In addition to the specific projects recommended for Kent County in the DFP, the Innovation 2045 freight strategy will also focus on Land-use issues. Specifically, "land-use policies, decisions, and related factors which influence the potential relationships or conflicts that may occur between existing/future developments and the freight movements that must serve or pass by the local communities" (DFP, P 136). Additionally, in support of economic growth and development opportunities, the D/KC MPO's planning interests include the preservation of critical freight infrastructure and freight oriented land-uses in key industrial areas and adjacent to rail corridors (DFP, P. 136).

To assist practitioners with freight planning on a regional basis, the University of Delaware facilitates a winter and summer Delmarva Freight Summit. These summits provide valuable information from the freight industry members. For example, [Trucking's Final Mile presentation](#) by Lee Derrickson (Delaware Motor Transport Association, Inc.) provides quantitative information regarding truck route selection and land-use issues affecting truck deliveries' final mile to commodity destinations.

The freight transportation element strategy includes remaining an active partner in the winter and summer Delmarva Freight Summits. Additionally, the D/KC MPO will continue implementing elements of the DFP in addition to implementing projects identified in D/KC MPO freight studies: 2018 D/KC MPO Rail/Freight Study; 2019 Kent County East / West Truck Freight Route Feasibility Study; 2019 City of Harrington Inter-modal Freight Terminal Feasibility Study, and the Dover Freight Study.

## **Safety**

Although listed as the eighth project level (transportation element) strategy, safety is the number one strategy. Safety initiatives focus on improvements to reduce crashes. DelDOT has a very active Highway Safety Improvement Program (HSIP), which follows the FHWA Highway Safety Improvement Program (HSIP). The FHWA HSIP is a "core Federal-aid program for the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance" ( <https://safety.fhwa.dot.gov/hsip/>). The following image is from the FHWA HSIP website and helps illustrate DelDOT's HSIP requirements.



DeIDOT continually reviews crash data and crash rates throughout the State. Through the HSIP, the DeIDOT identifies roadway segments and intersections that have higher than average crash rates, notes the primary contributing circumstances for the crashes, and develops recommendations to address the identified safety needs. Recommendations can typically range from signing and striping improvements to major roadway widening. The HSIP, which is a Federally-funded program, is DeIDOT's primary means of identifying and addressing safety needs. DeIDOT publishes an annual **Highway Safety Report**, which provides an overview of strengths, efforts, challenges, and legislative issues that provide a comprehensive review of the year's success stories. DeIDOT also publishes a **Highway Safety Plan** which provides an overview of Delaware's highway safety priority areas; goals and objectives; guidelines for applying for federal funds and a brief description of each project which will be implemented during the planning year and the amount of federal highway safety funds that have been allocated for that project). Both documents can be found on the Delaware Office of Highway Safety website ( <https://ohs.delaware.gov/reports.shtml> ).

In addition to all D/KC MPO projects and studies evaluated with a safety screening criteria in the prioritization and selection process (see chapter VI, Decision Lens), specific safety projects are listed in Chapter VI and DeIDOT's Capital Transportation Plan (CTP) and CTP Development Plan. As part of DeIDOT's CTP FY20 - FY27 Development Plan, a "spend plan" is updated monthly and is adjusted as the fiscal year progresses. As of June 2020, DeIDOT lists 8 Kent County Safety Projects in the FY20-26 Development Plan. Projects that are in later years are projections until they are officially approved as part of the STIP. Therefore, the published CTP and approved STIP both list the approved safety projects that are part of DeIDOT's CTP Development Plan.

The Strategy is to support DeIDOT's Highway Safety Plan and annual Report and include safety criteria in D/KC MPO Performance Measures. Also, the MPO will maintain safety as the most important screening criteria when considering road safety projects that are expected to help reduce the number of fatalities and serious injuries by 50% by 2035.

## ***Fusing the Strategic Approach***

As will be further explained in Chapter VI, Decision Lens is the software system used to evaluate transportation projects in the D/KC MPO planning area. This project selection process was approved by the D/KC MPO Council on July 8, 2020 as the mechanism to assess community benefits of proposed transportation projects while considering federal metropolitan planning factors and the community-driven goals and objectives established during the drafting of Innovation 2045 and specifically described in Chapter I.

Specific to Innovation 2045, Decision Lens was used to evaluate and score transportation projects categorized in any one of the eight categories (also referred to as Project Level (Transportation Element) Strategies) to establish funding priorities. Elements of the four overarching regional strategies, Federal and State partners strategies, and integration with our Local partners' economic and land-use policies are all linked through the D/KC MPO Decision Lens Project Priority Process when considering funding priority for any transportation project within the eight project categories (Transportation Elements).

The decision lens process applied technical judgement about the transportation project's ability to:

- meet national, regional, and state transportation planning objectives;
- apply national and state performance measures;
- consider state and local land use planning and policy initiatives;
- include environmental considerations; and
- evaluate social justice concerns.